ANALYSIS OF INTERNET BANKING APPLICATIONS AND MOBILE BANKING ON THE LEVEL OF BANKING SERVICE QUALITY

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ABSTRACT

Internet usage in Indonesia is quite large as it has been submitted by the Ministry of Communication and Information of the Republic of Indonesia (KOMINFO) states that the number of active Internet users in Indonesia Reached 73 million users of the which 7% are doing transactions over the internet. While the FSA stated by the data 13 large banks in Indonesia, the frequency of transactions through e-banking in 2012 and as much as 3.79 billion transactions with a nominal value of Rp. 4.441 trillion, Increased to as much as 4.73 billion transactions worth a nominal value of Rp. 5.495 trillion in 2013, in 2014 Increased respectively to 5.69 billion transactions with a nominal value of Rp. 6447 Trillion. Looks of the statement that internet banking and mobile banking influence in banking transactions. Internet banking and mobile banking is one of the services provided by the bank which is intended to facilitate consumers in making banking transactions. The services provided by the bank is also intended to have a level of service quality is very good to the consumer. The method used is survey method, the analysis is a descriptive and verification. This study uses a simple linear regression analysis, Pearson correlation, hypothesis testing using t-test, and the coefficient of determination.

Key word: Internet Banking, Mobile Banking, Service Quality

Introduction

Internet banking and mobile banking is very common in everyday transactions and is no longer something new methods of accessing banking. With the Internet increasingly accessible as well as the development of growth will be the use of internet and mobile banking, it can be seen the extent to which the importance of the quality provided by the bank.

Where the Internet can be used as a medium to find information about products and competitors, as well as to what is in demand by consumers outside. (Susanto, Azis, and Irjayanti; 2016). The technology needed continuously in the process of business operations are complementary in producing a quality product with an effective and efficient process. An effort needs to be made on performance measurement as a basis for meentukan how high achievement of productivity (Irjayanti, Azis, and Juariah; 2016).

Basically internet banking was made in order to facilitate the two sides, between the customer and the bank. Here are some of the benefits of Internet Banking for the customer and the bank. By using the Internet Banking facility actually benefit the customer. The benefits of internet banking for such customers are customers no longer need to visit the bank to conduct banking transactions. Thus, customers benefit in terms of time and cost.

Increase the performance through saving all tacit knowledge from their potential workers. Especially in service industry like banking, where most knowledge obtained from experiance while serving clients, to achieve its best performance, service industry should put knowledge management as a standard. Identifying of profile and banking habits as well as their awarness, usage, is important to influence degree of satisfaction, included factors of determining customers like friendliness of bank personnel an caring atitude toward customers. (Irjayanti and Azis, 2013).

Other benefits for customers are able to conduct transactions quickly anywhere and anytime as long as it is connected to the Internet network. As for the bank to provide the facility of Internet Banking, the bank aided in reducing operating costs. Another advantage is that by providing the internet banking will lead people to become customers of the bank.

LITERATURE STUDY

Literature on the Study in European Countries and Asian Countries such as Sayar and Wolfe (2007) said that Differences between the two countries regarding their banking sectors and technological infrastructures are not reflected in the two countries provision of internet banking services. Despite the clear leadership of the UK in these areas, internet branches of Turkish banks offer services as developed as their British counterparts; furthermore it can be said that Turkish banks are more advanced in terms of service diversity. Analysis of the internet branches of British and Turkish banks in the sample reveal that the service range of British banks is concentrated mainly around information (statements and balances) and money transfer (from the account of the user to make bill payments) services followed by credit card services. On the other hand, in addition to these, Turkish internet branches have a large portfolio of investment transactions and other convenience services like payments of insurance premiums, traffic fines, university fees and online top ups for mobile phones. The major findings of this study can be summarized as follows: first, Turkish banks offer a wider range of services from their internet branches compared to British banks, despite the fact that the UK has a more favourable environment for internet banking in terms of its banking sector and

technological infrastructure. Second, the main reasons for this are advanced to be the different banking cultures of two countries and the technology appetite of Turkish banks. Finally, a difference is observed in the approaches of banks towards the issue of "security" where Turkish banks rely on technology to avoid fraud and British banks prefer more conventional methods to discourage it. We also conclude, consistent with other findings in the literature, that; despite all the advantages a bank enjoys by offering internet banking services, the decision of customers to use these services depends primarily on their perceptions, especially those related to security and ease-of-use issues.

According to the fourth survey of Internet user survey there are seventeen million Internet users in Taiwan (coming third in Asia behind South Korea with fifty-three million and China with twenty-five million). However, not every Internet is an Internet banking customer. Hong Kong and Singapore are the Asia Pacific areas recording the most frequent engagement in financial activities in virtual space. The same survey noted that the security issue is a major influence on the growth of Internet banking because of the processing of sensitive personal information involved. So it may be said that Internet banking in Taiwan is in its formative stage and offers considerable scope for growth. (Ya-Yueh Shih and Kwoting Fang, 2004)

INTERNET BANKING

Internet banking is a young banking innovation with an unclear and uncertain future. Issues include the nature of the impact of internet banking in the context of changes already occuring within the industry such as escalating competition, changing consumer behaviour and needs, globalisation, deregulation, disintermediation and the emergence of new financial service models. Fuhers, despite the range of inhibiting and motivating factors identified regarding the diffusion of innovation (Bradley and Stewart, 2002).

Karen Furst, et al (1998) said Internet banking is the use of the Internet as a remote delivery channel for banking services, Including traditional services, such as opening a deposit account or transferring funds Among different accounts, as well as new banking services, such as electronic bill presentment and payment, the which allow customers to receive and pay bills over the bank's website.

From this sense, can be defined simply that internet banking is a form of internet media utilization by the bank to promote and conduct transactions online at the same time, both of the products that are conventional and new.

Mobile Banking

According to the dictionary of computer and information technology MOBILE BANKING (M-Banking) means banking facilities through mobile communication such as handphone.Dengan provision of facilities similar to ATM but to take the money in cash. (Http://www.total.or.id/info. php? kk = Mobile% 20Banking)

With the M-Banking, the banks tried to facilitate access to its customers in conducting their with M-Banking service, customers of banks that already have the service certainly did not need to go to the ATM or Bank office.

Almost all banks in Indonesia has provided M-Banking either SIM tolkit (Menu Service Data) or plain text (sms manual) or known as SMS banking.

M-Banking advantages is that it can be accessed by all mobile phone users with the type GSM M-Banking facilities have several drawbacks including the access to the CDMA mobile phone users, not all CDMA operators have M-Banking services.

Quality of Services

Quality of service is often defined as the fulfillment of the desires of business customers as well as the accuracy of service delivery in order to meet customer expectations. According Wyckof in Fandi Tjiptono (2007: 59) argues that Quality of service is the level of excellence (excellence) is expected in control of excellence to meet customer desires.

To achieve the level of excellence, every employee should have certain skills, such as good and neat, be friendly, show morale and attitude are always ready to serve, quiet work, not high-minded because they feel needed, to master a good job tasks in part or departement and other parts, is able to communicate well, understand the language of gestures (gesture) customers, and have the ability to handle customer complaints in a professional manner.

Measuring Quality of Services

In one study of SERVQUAL by Parasuraman (1988) involving 800 customers (which is divided into four companies) aged 25 years and above, it was concluded that there are five dimensions of SERVQUAL as follows (Parasuraman, et al., 1988), quoted by Rambat Lupiyoady (2006 : 182)

a. Tangibles
   The ability of a company to indicate its existence to external parties. Appearance and abilities of physical infrastructure companies which may be provided by a service provider. This includes physical facilities (eg, buildings, warehouses, etc.) equipment and tools used (technology), as well as the appearance of employees.
b. Reliability

The company's ability to provide services to the promise of accurate and reliable.

c. Responsiveness
A policy to assist and provide fast service (responsiveness) and right to the customer, with the delivery of clear information.

d. Assurance
Knowledge, politeness, and the ability of the company's employees to gain confidence of the customers to the company. This includes several components, among others, communication (communication), credibility (credibility), safety (security), competence (competence), and manners (courtesy).

e. Empathy
Providing a genuine concern and the individual or individuals that is provided to customers by striving to understand the desires of consumers.

Quality of service is not measured from the perspective of service providers but more important from the viewpoint of customer. This is because the customer who purchase and consume these services, so it should be when the assessment of the quality of services performed by essentially customer. customer is the buyer remains that have the ability to buy and implement the company's purchases.

RESEARCH METHODOLOGY

The method used in this research is survey method. While this type of research is associative causal (Sugiyono, 2009: 11). Associative research is research that aims to determine the relationship between two or more variables. This research using questionnaire and Spearman Rank correlation.

Population and Sample Resecarh

The population in this study are customers who use internet banking and mobile banking at Bank Syariah Mandiri. Population of this study amounted to 90180. To determine the sample size, it can be used formula Slovin (Sugiono, 2009) as follows:

$$n = \frac{N}{N(d)^2 + 1}$$

Information :
n : Number of samples
N : Number of population
d : desired level of precision that is equal to 10%

The formula is based on the number of samples obtained as follows

$$n = \frac{90180}{90180(0.1)^2+1} = 99{,}88$$

$n \approx 99$ responden

So the sample used in this study were 99 respondents. The sampling technique using a convenience sampling technique, in this case based on random sampling, namely anyone who incidentally met with investigators can be used as a sample, when viewed people who happen to encounter it suitable as a data source

Variable Operationalization

Below is a table operationalization of variables, namely:

Table 1: Variable Operationalization X and Y

Variable	Sub Variable	Indicator
I-banking dan m-banking	- Software	- Menu is beneficial for customers of i-banking and m-banking - Applications are diverse - Application as needed - System standard
	- Database	- Information clear transactions - The transaction information known only to the customer
	- Personel	- Servicing of customer service easier to understand - Services as needed
	- Prosedur	- Ease the time of registration - Easy to use

Variable	Sub Variable	Indicator
Service Quality	*a. Reliability*	- The current speed of transactions - Tariff on certain types of transactions independent internet banking and mobile banking self - Confidentiality of customer data
	b. Responsiveness	- Alertness of the bank in dealing with customers - The response of banks to clients
	c. Assurance	- Guarantee the security of current transactions
	d. Emphaty	- Information that could be accounted for bank - Understanding of client issues
	e. Untangibles	- Menu that can be understood - View company's Web site as needed

Data types

Data used in this study are primary data and secondary data. In this study the primary data obtained through a questionnaire on the internet banking and mobile banking in Bank Syariah Mandiri. Secondary data obtained through the study of books, journals and other written materials.

Data analysis

To determine the application of internet banking and mobile banking is done by Bank Syariah Mandiri do observes, questionnaires, data collection on the website. And to know the perception of the customer as well as the influence of internet banking and mobile banking on the level of service at the bank using a questionnaire distributed to a number of clients.

Data obtained from the questionnaire answers were processed and analyzed by using Likert scale with a scale of 5 = strongly agree, 4 = agree, 3 = undecided, 2 = disagree, 1 = strongly disagree.

According Sugiyono (2009: 93) Likert scale used to measure attitudes, opinions, and perceptions of a person or group of people on fenomenasosial. With Likert scale, variables to be measured in describe into indicator variables. Then these indicators serve as a starting point to construct items instrument that can be a statement or a question.

Respondents Against I-Banking and M-Banking

Here are the respondents put forward by the customers using internet banking applications and mobile banking on i-banking and m-banking based on a statement has been made by the author.

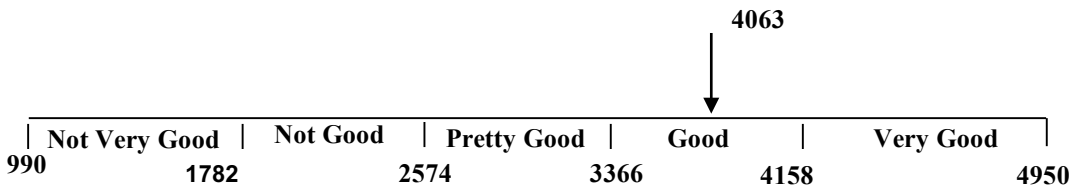
To determine the overall responder about I-banking and m-banking, the categorization is made in advance. Here is a recap of the score table for each statement in I-banking and m-banking.

Table 2: Respondents answer Variable Accumulation For I-Banking and M-Banking

No	Question	Score
1	Registration facilitation of i-banking and m-banking is very simple and as costumer needed	401
2	The system used in the i-banking and m-banking was up to standard on the i-banking and m-banking standalone Islamic banks	390
3	The use of i-banking and m-banking is easy to use by customers	400
4	Any use i-banking and m-banking customers can find out information on transactions that have been carried out	411
5	Application services offered by i-banking and m-banking has been very good	405
6	All information i-banking and m-banking is only known by the customers of i-banking and m-banking	419
7	Employee customer service explain i-banking and m-banking is very easily understood by customers of i-banking and m-banking	403

No	Question	Score
8	The services provided by employees to customers i-banking and m-banking is very satisfying	407
9	Customer i-banking and m-banking to benefit more from the menu provided in the application such as toll charging	415
10	There is a donation app, zakat and takaful in i-banking and m-banking that makes it easy to simultaneously serve	412
Total		4063

Based on calculations, the total score for the variable I-banking and m-banking.
Further calculations and scores are presented in the following picture:



Based on calculations, the total score to i-banking and m-banking is 4063 which is located between the range of 3366 and 4158. Thus i-banking and m-banking in general are in either category.

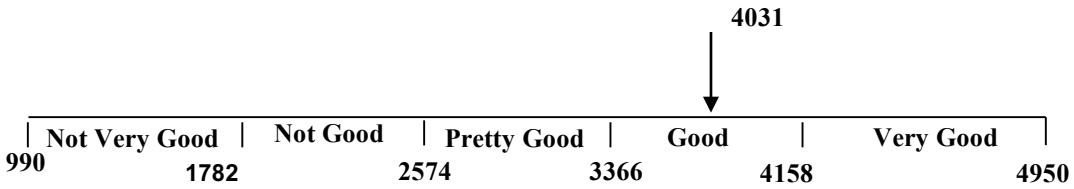
Respondents Against Service Quality

To know responder comments about the overall service quality, then the categorization made in advance. Here is a recap of the score table for each statement in service quality.

Table 3: Accumulated Answer Respondents For Variable Services Quality

No	Question	Score
1	Transactions run smoothly for quick access when using i-banking and m-banking	401
2	Bank providing security assurance within the time the transaction took place	399
3	Cost of transactions, relatively affordable by the customer in using the facilities i-banking and m-banking	405
4	Confidentiality of customer data secured	411
5	The menu is presented in trasaksi i-banking and m-banking is very easy to understand and complete	380
6	The bank is always eager to serve the customers using i-banking and m-banking	409
7	Data and information provided by the banks can be justified	411
8	Bank can accept and understand the problems faced by customers i-banking and m-banking with either	412
9	Banks are very responsive to the issues facing customers i-banking and m-banking	413
10	Interface / look of the website is very easy to understand and appropriate to the needs of the 397 transactions	390
Total		4031

Based on calculations, the total scores for variabel service quality.
Further calculations and scores are presented in the following picture:



Based on calculations, the total score for the level of service is 4031 which is located between the range of 3366 and 4158. Thus, the general level of service that are in either category.

Spearman Rank Correlation

To determine the "Effect of I-banking and m-banking to the level of service quality", then we use Spearman rank correlation analysis with the following model:

Hypothesis :

H_0:ρ = 0 (There is no relationship between the I-banking and m-banking (X) The service quality (Y))

H_1:ρ≠ 0 (There is a link between the I-banking and m-banking (X) The service quality (Y))

$\alpha = 0{,}05$

Since there are the same value, then the value of Spearman Rank correlation coefficient was calculated by the equation (2).
Correction value $T_x = 2227.5$
Thus:

$$\sum x^2 = \frac{N^3 - N}{12} - \sum T_x = \frac{99^3 - 99}{12} - 2227{,}5 = 78622{,}5$$

Value Correction: $T_y = 2151$
thus:

$$\sum y^2 = \frac{N^3 - N}{12} - \sum T_y = \frac{99^3 - 99}{12} - 2151 = 78699$$

$$\sum d_i^{\,2} = 28986{,}5$$

$$r_s = \frac{\sum x^2 + \sum y^2 - \sum d_i^{\,2}}{2\sqrt{\sum x^2 \sum y^2}} \quad r_s = \frac{78622{,}5 + 78699 - 28986{,}5}{2\sqrt{78622{,}5x78699{,}5}} = 0{,}816$$

Hypothesis testing
H0: β = 0 means that there is no influence between i-banking and m-banking (X) on the level of service (Y).
H1: β ≠ 0 means that there is influence between i-banking and m-banking (X) on the level of service (Y).
The formula used in the above test the hypothesis that using student t test:

$$t_{hit} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0{,}816\sqrt{99-2}}{\sqrt{1-0{,}816^2}} = 13{,}89$$

With α= 5% and dk = n-2 = 97 obtained t table value of 1.98.
Based on the following test criteria:
1. Accept Ho if -t table <t <t table
2. Reject Ho if t> t table or t <t table

Based on the calculations above, can be obtained t value of 13.89. Because the value of the t (13.89)> t table (1.98), then Ho is rejected. That is, there is influence between i-banking and m-banking (variable X) on the level of service (Y).

With significance level of 5% or a confidence level of 95%, there is a relationship between the i-banking and m-banking with the level of service in Bank Syariah Mandiri. Thus it can be concluded that the higher i-banking and m-banking, the higher the level of service.

Because the correlation coefficient values we calculate equal of 0,816, it can be concluded there is a significant relationship between the i-banking and m-banking (X) with the level of service (Y).

Reject H0 if the Sig. (2-tailed) or p-value (no significant correlation). Accept H0 if the Sig. (2-tailed) or p-value> (correlation is not significant). Because the value of Sig. (2-tailed) or p-value = 0.000 <0.05, then H0 is rejected. In other words, with a significance level of 5% or a confidence level of 95%, a significant relationship between the i-banking and m-banking (X) with the level of service (Y), with the direction of positive relationships. The higher the i-banking and m-banking, the higher the level of services in commercial banks.

Analysis Coefficient of Determination

The magnitude of the effect of i-banking and m-banking (variable X) on the level of service (Y) is indicated by the coefficient of determination with the following formula:

KD $= r^2 \times 100\%$

KD $= (0.816)^2 \times 100\ \%$

$= 66{,}5\%$

That is, i-banking and m-banking (variable X) effect of 66.5% against the level of service (Y). While the rest of 33.5% can be explained by other variables not examined by the author.

Conclusion

Results of testing the hypothesis on the effect of variable application of internet banking and mobile banking show that:

- T_{count} values for variable applications internet banking and mobile banking amounted to 13.98 while ttabel 1.98 with a value of 0.05 indicates that the application of internet banking and mobile banking have a significant effect on the level of service at Commercial Bank.
- R_{square} value of 66.5%, amounting to 66.5% indicates that the variable change service levels can be explained by the determinant variables in the model, while the remaining 33.5% influenced by other variables.
- The effect of the application of Internet banking and mobile banking on the level of service is of 66.5% because the respondents gave a positive response.

Suggestion

Based on the conclusions outlined above, the researchers tried to give suggestions as inputs for the company in improving consumers' purchase decisions. As for suggestions that can researchers proposed based on the above conclusions are as follows:

1. Given the level of service to internet banking and mobile banking is only 66.5%, the bank should maintain and increase quality of service provided to customers of Bank Syariah Mandiri who use internet banking and mobile banking
2. In order for the customer more loyal to the bank, the commercial banks prefer the needs of customers in various transactions through internet banking and mobile banking by providing seamless network without restriction network (not accessible).
3. Submission of clear communication of customer service to its customers do with the intense, it is done so that more customers feel the service Internet banking and mobile banking are more than satisfactory.

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